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Abstract

Family medicine is the medical specialty that provides continuing and comprehensive health care for the individual and the family. It is the specialty in breadth that integrates the biologic, clinical, and behavioral sciences. The scope of family medicine encompasses all ages, both gender, each organ system, and every disease entity. The family physician is a physician who is educated and trained in the discipline of family medicine. Family physicians possess distinct attitudes, skills, and knowledge that qualify them to provide continuing and comprehensive medical care, health maintenance, and preventive services to each member of a family regardless of gender, age, or type of problem (i.e. biologic, behavioral, or social). These specialists, because of their background and interactions with the family, are best qualified to serve as each patient's advocate in all health related matters, including the appropriate use of consultants, health services, and community resources. Prevention is a large part of family medicine. Family physicians provide preventive health care on a daily basis and are frequently consulted by clients on how to stay healthy and avoid disease. Prevention can be divided into three categories: primary, secondary, and tertiary. Family physicians should consider how all three categories may benefit each client.

Keywords: family physician, sudden infant death syndrome

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Introduction:

Sudden Unexpected Infant Death (SUID) is a term that englobes the sudden and unexpected death of an infant less than 12 months, which can be explained by organic or traumatic causes, or that can't be explained such as cases of Sudden Infant Death Syndrome (SIDS) (SIDS; term for deaths that remain unexplained even after thorough investigation of the case and scene, clinical history, and autopsy of the body) (Konstat-Korzenny et al., 2019).

Based on diagnostic criteria by CDC most SUIDs are reported as one of three types of infant deaths: SIDS, unknown cause, and accidental suffocation and strangulation in bed. About half of SUIDs are SIDS (Erck Lambert et al., 2018).

SIDS, a type of SUID is referred to or described by various names for many years, and currently defined as the sudden death of infants under the age of one-year-old that cannot be explained after performing a comprehensive investigation and a clinical history and autopsy examination (American Academy of Pediatrics (AAP), 2016) & (Centers for Disease Control and Prevention (CDC), 2017) a. Because most cases of SIDS occur when a baby is sleeping in a crib, SIDS is also commonly known as crib death or cot death (Spinelli et al., 2017).

Epidemiology:

According to CDC (2016), in the United State (US) nearly 3,500 infants die suddenly and unexpectedly each year with no immediately obvious cause (Gollenberg and Fendley, 2018). On the other hand, worldwide in 2015, there were about 1,600 deaths due to SIDS (43%), 1,200 deaths due to unknown causes (32%), and about 900 deaths due to accidental suffocation and strangulation in bed (25%) (CDC, 2017) b.

According to AAP, more than 3,500 infants die annually due to SUID and sleep-related deaths (AAP, 2016). In 2010, it was reported that one out of three postnatal deaths, and one out of seven infant deaths were attributed to SUID (United States Department of Health and Human Services (US DHHS) and CDC, (2019).

The CDC reported 3,600 SUID cases in 2017, further dividing it into SIDS (38%), accidental suffocation and strangulation in bed (26%) and unknown causes (36%) (CDC, 2019). The incidence of SUID seems to be more prevalent in the African American, American Indian and Native Alaskan population (AAP, 2016).

Role of family physician in prevention of SIDS

Family medicine is the medical specialty that provides continuing and comprehensive health care for the individual and the family. It is the specialty in breadth that integrates the biologic, clinical, and behavioral sciences. The scope of family medicine encompasses all ages, both gender, each organ system, and every disease entity (Rakel, 2016).

Family Physician:

The family physician is a physician who is educated and trained in the discipline of family medicine. Family physicians possess distinct attitudes, skills, and knowledge that qualify them to provide continuing and comprehensive medical care, health maintenance, and preventive services to each member of a family regardless of gender, age, or type of problem (i.e. biologic, behavioral, or social). These specialists, because of their background and interactions with the family, are best qualified to serve as each patient's advocate in all health related matters, including the appropriate use of consultants, health services, and community resources (Rakel, 2016).

Family Physician and Prevention of SIDS:

Prevention is a large part of family medicine. Family physicians provide preventive health care on a daily basis and are frequently consulted by clients on how to stay healthy and avoid disease. Prevention can be divided into three categories: primary, secondary, and tertiary. Family physicians should consider how all three categories may benefit each client (Campos-Outcalt, 2016).

Primary prevention is the prevention of a disease or condition from occurring. It can be, but is not always, cost saving for society. Secondary prevention involves screening of asymptomatic individuals for a disease to detect it early and with early intervention achieve a better outcome than with later detection and treatment. Although, secondary prevention does not result in more money saved than spent, it can lower the morbidity and mortality. Tertiary prevention involves interventions that occur after a disease or condition is evident, in an attempt to make the affected person healthier and improve quality of life. Tertiary prevention also is not cost saving, but it can prevent a repeat event (Campos-Outcalt, 2016).

According to the previous definitions of the three levels of prevention, the role of family physician in prevention of SIDS focus on health education programs about SIDS protective factors aiming to address these issues in order to reduce SIDS risk and cases (Elbilgahy et al., 2019).

Health education is defined as the development of individual, group, institutional, community and systemic strategies to improve health knowledge, attitudes, skills and behavior. The purpose of health education is to positively influence the health behavior of individuals and communities as well as the living and working conditions that influence their health (Donatelle, 2009).

Health education has multiple definitions. The Joint Committee on Health Education and Promotion Terminology of 2001 defined health education as "any combination of planned learning experiences based on sound theories that provide individuals, groups, and communities the opportunity to acquire information and the skills needed to make quality health decisions." The WHO defined health education as any combination of learning experiences designed to help individuals and communities improve their health, by increasing their knowledge or influencing their attitudes (WHO, 2015).

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Basically, the purpose of health education is to eliminate undesirable behaviors and replace them by appropriate and productive behavior leading to healthy lifestyle life, areas within this profession encompass environmental health, physical health, social health, emotional health, intellectual health, and spiritual health (Fallah et al., 2013).

Sleep environment and positioning play a large preventable role in decreasing the number of SIDS (Goldberg et al., 2018).

The most effective way to reduce the risk of SIDS is to put an infants under the age of one on their back to sleep during their sleep, other measures include a firm mattress separate from but close to caregivers, no loose bedding, a relatively cool sleeping environment, using a pacifier and avoiding tobacco smoke exposure. It can also be preventative by breastfeeding and immunization (AAP, 2016). In addition, room-sharing without bed sharing have shown favorable impacts as protective factors (Hauck et al., 2011).

Breastfeeding:

Breastfeeding has been proven to be protective against SIDS, and this effect is stronger when breastfeeding is exclusive (Hauck et al., 2011). Unless contraindicated, mothers should exclusively breastfeed or feed with expressed milk (i.e., not offer any formula or other nonhuman milk-based supplements) for six months (Eidelman et al., 2012).

Breastfeeding has been shown to reduce the risk of various diseases including otitis media, necrotizing enterocolitis, asthma, diabetes, obesity, and SIDS (AAP, 2012). One meta-analysis demonstrated that breastfeeding for at least two months was protective for SIDS, with a directly proportional relation with increased time of breastfeeding (Thompson et al., 2017).

Partial and exclusive breastfeeding proved to be protective in infants who only slept in the supine position, although exclusive breastfeeding proved more protective than partial (Vennemann et al., 2012).

Because of all these described benefits, the term “breastsleeping” was coined. It tries to englobe the notion that maternal contact has a critical role in optimization of breastfeeding, and the fact that data and information should be gathered from studies of breastsleeping dyads, because of possible different outcomes from studies where no breast sleeping is performed (McKenna and Gettler, 2016).

Moreover, Alm et al., (2016) presumed that breast feeding has a defensive effect on prevention of SIDS. Additionally, the protective effect of breastfeeding increases with exclusivity. However, any breastfeeding has been shown to be more protective against SIDS than no breastfeeding (AAP, 2016).

Pacifier:

The use of a pacifier before naptime and bedtime is accepted and recommended by the AAP, even though it may be related to cases of malocclusion and breastfeeding technique concerns. Multiple studies have yielded evidence that this intervention may reduce the risk of SUID from 50-90% (AAP, 2016).

Studies have reported that using pacifiers reduces the risk of SIDS (Moon et al., 2012). Pacifiers should thus be introduced at sleep times after an infant has developed and maintained a pattern of successful latching during breastfeeding, a period that should not extend more than three to four weeks after breastfeeding initiation (AAP, 2016). The previously published research, however, has found that pacifier use does not interfere with breastfeeding instead; easy access to formula may be the biggest deterrent (Kair et al., 2013).

Moreover, Alm et al., (2016) presumed that the use of a pacifier has a defensive effect on prevention of SIDS. Many of observational studies reported that, there were a relationship between pacifier use and SIDS incidence reduction (Psaila et al., 2017).

Pacifier use has been shown to decrease the incidence of SIDS if mothers follow proper guidelines for its use recommended by AAP as the mother should offer a pacifier to the infant at nap time and bedtime and never force their infant to take the pacifier if he refuses it (Mohamed et al., 2021).

Sleeping room and crib:

Room sharing is not a synonym of co-sleeping. It implies sleeping in the same room but on separate surfaces, albeit close to them. Studies have demonstrated that room sharing may reduce the risk of SIDS in half. Therefore, room sharing is essential for at least the first six months of life and recommended ideally during the first year (AAP, 2016).

The term "Bed sharing" and "co-sleeping" are used interchangeable, but their meaning are different. Sleeping on the same room is a quite new term and is recommended by the AAP to facilitate feeding, caring and monitoring the infant. Infant sleeping in the same room not in the same bed has also been revealed to reduce the risk of SIDS by half (AAP, 2016).

Studies have demonstrated that minimizing the bed sharing habits of parents with their babies can be expected to decrease the rate of SIDS significantly (Carpenter et al., 2013).

The AAP recommendation enforces that infants' sleeping should be in the room of their parents, near to their bed, but in his separate crib for one year of life (McDonald et al., 2019).

Sleeping surface & bedding:

AAP, (2016) stated that the infants should be placed on a firm sleep surface and covered by a fitted sheet with no other bedding or soft objects to reduce the risk of SIDS and suffocation. A firm surface maintains its shape and will not indent or conform to the shape of the infant's head when the infant is placed on the surface.

Soft materials or objects, such as pillows, quilts, comforters, or sheepskins, even if covered by a sheet, should not be placed under a sleeping infant. If a mattress cover to protect against wetness is used, it should be tightly fitting and thin (Colson et al., 2013).

Infant covering, wrapping, and overheating:

Parents and caregivers should watch for signs of overheating, and then keep the baby's face and head uncovered during sleep. Overall all, infants should be wearing appropriate clothes suitably for the environment (Caraballo et al., 2016). In addition, according to AAP recommendation parents should maintain child and room temperature (Newberry, 2019).

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